

Anders (H. S.)

A Case of Uremic Convulsions

+ + + + +





A Case of Uremic Convulsions; Venesection; Recovery; Remarks.

By HOWARD S. ANDERS, A. M., M.D., (University of Pennsylvania); Lecturer and
Clinical Instructor in Physical Diagnosis, Medico-Chirurgical College;
Visiting Physician to the Samaritan Hospital, Philadelphia, Pa.

Written for the Charlotte Medical Journal.

About the subjects of uremia and venesection, independently considered, medical history teems with successions of new and added knowledge and interest. This is especially true of the latter.

As a practical remedial measure, blood-letting has had a remarkable record; and this of a somewhat periodic or cyclic nature. The vexatious question, when, if ever, to bleed or not to bleed, has recurred with renewed ardor in one direction or another, over and over again, after intervals of years and generations. Over-zealous and reckless advocacy and adoption, unreasonable and virulent opposition, and skeptical and hurtful neglect, have each had their turn.

The outcome is this: some established truth; much imperfect knowledge; more accurate and universal observation, investigation, and scientific classification and generalization of facts and principles, recognized as necessary for soundness and safety. For, this century-end period is nothing if not rationalistic and moderate in medicine; no matter how radical and fad-loving it may be in social, financial, and other affairs. Obviously, to the carefully thinking and reviewing mind, the vehement and spirited controversies of the past may throw their burden of blame justly upon three main factors: faulty observation and limited individual experience—mere empiricism; fallacious inductive reasoning and conclusions, involving premises based upon the preceding—the excesses of the *post hoc propter hoc* argument; lastly, lay criticism—especially from “them literary fellers.”

Thus, of venesection—or, phlebotomy—it may be said that we have had the *abuse*, and the *disuse*; let us continue to strive for its *use*—its permanent and true use on the bases of *scientific* empiricism. Neither the physician nor his patient want to see a reversion to its abuse; as in the days of the “drawers of blood and hewers of limbs;”^{*} or to its absolute disuse; as when, even when life might have been saved, it was held to be “contrary to common sense; to the intelligent reason; and to the manifest laws of the Divine Providence.”

^{*}Oliver Wendell Holmes.

In recent years we have come to recognize blood-letting as a most efficacious measure in practical medicine. Furthermore, a widespread desire in the profession for reliable data and indications concerning the employment of venesection is leading to a wholesome and careful clinical study of the true value of this remedial agency.

The paper on venesection read by Dr. Pye-Smith before the Royal Medical and Surgical Society in January, 1891, attracted much attention. That, as stated by him, "the accumulation of experience would soon lead to the formation of an opinion as to the cases in which this measure was desirable," was eminently true, is proven by the marked revival of interest which has been shown during the past few years in the subject, with a view to establishing the value of blood-letting on a more scientific basis; as well as by the advance which has already been made towards a fulfillment of the desire for a more or less clear classification of the conditions indicating the use of the lancet.

There has been, so far, very little if any improvement on Pye Smith's category of cases where the employment of venesection may be expected to do good. This may be restated, profitably: first, cyanosis with distention of the right side of the heart, whether from pulmonary or other obstruction of the circulation; second, the intense pain of aortic aneurism; third, uremic and prolonged epileptic convulsions.

Without digressing further to discuss the reasons for expecting and getting favorable results following the use of venesection for uremic convulsions, I desire to report this case:

June 1st, 1894, a senior medical student brought to me his brother, E. D., aet. 20, single, born in this country, and a newspaper type-setter by occupation. His parents are living and well; the family history is negative as bearing upon the case. The patient's habits are irregular and imprudent; is a capricious eater, both as to quantity and selection of food; he eats too rapidly; he uses beer pretty often, though not excessively; he is a "cigarette fiend," smoking many packages of these nerve-poisoners, daily; he has always been careless about wearing proper clothing and foot-wear in cool, damp weather, especially at night and on the streets; and does not allow himself sufficient rest and sleep. He has had no serious illness.

A few nights previous to visiting me he was exposed to cool, damp draughts of air, while indulging in a few glasses of beer in a suburban park, and later, also, while returning thence by boat and street car. He awoke the following morning with some headache, dulness, and pallor and puffiness of the face. The urine passed then was free, but slightly darker than normal. When I saw him on the date mentioned above—about 30 hours afterward—he complained that the headache had become so excruciating that his brother was constrained to give him some morphine and phenacetin, which gave a little relief that morning.

The face was pale; and puffed lower eye-lids were distinct. There was slight nausea, and some eructations. Slight aching across the loins was complained of. The ankles were a little edematous. A specimen of urine brought along was dark amber in color, acid in reaction, and had a specific gravity of 1016. On agitating the bottle, an abundant foam was produced, the greater portion of which remained on the surface of the urine. Chemical examination—boiling test—gave about one-third albumen, by volume. The patient was ordered to bed; a calomel purge to be given; and hot blanket and hot water-bottles to be applied to encourage free diaphoresis.

On the following day, about noon, I was sent for in hot haste, the messenger alleging that my patient was having convulsions. Two other physicians near by had been summoned at about the same time; one of whom had given an hypodermic injection of morphine. Before they left we resorted to two hypodermics of pilocarpine, aa gr. $\frac{1}{8}$; continuing the hot applications meanwhile. Four uremic (epileptiform) convulsions—for such they were, clearly enough—had occurred already. A fifth took place within 30 minutes, while I watched; and the skin seemed not to respond one particle, it having remained dry from the onset. The pulse beats were 140 per minute; the respirations were accelerated and noisy; the face was cyanotic, the pupils moderately dilated; there was capillary congestion of the skin of the body and members. The urine was suppressed. The pulse being large and tense, the skin failing to act, and another (sixth) convulsion being imminent, I decided at once to open a vein. The left median basilic was selected on account of its prominence; and the patient bled—a thick tarry stream flowing—until the pulse became softer and quieter, the respiration tranquilized, the skin of the face pale-red instead of congested, and signs of returning consciousness appeared; it needed the abstraction of about 20 ounces of blood to effect these. Shortly thereafter, the cutaneous flood-gates were opened, and a profuse perspiration followed. Micturition was soon accomplished; the amount passed *per diem* gradually increasing; while the albumen kept on decreasing, until at the end of one month the merest trace was detectable by Heller's contact test.

Within two weeks convalescence had started. The diet was skimmed milk, light cereals, vegetables and fruits; lemonade, plain soda-water. A mixture of potassium acetate and infusion of digitalis was taken from the second day, for about one week. This was succeeded by strychnine sulphate and Basham's mixture. Two months later the albuminuria had entirely disappeared, aided, perhaps, by the use of strontium lactate. The physical signs of hypertrophy of the left ventricle, were superadded upon those of mitral insufficiency—the latter elicited early in the case, and probably the result of acute dilatation of the heart during the attack of uremic eclampsia.

After careful deliberation, it is the writer's conviction that it is not overstepping the bounds of modesty or fact to assert that, if ever life was saved by the interposition of blood-letting, then the case cited above is an instance of the same.

The question as to what causes uremia is as yet a remote one; the principle of the treatment is not so; but may be expressed by the one word—*elimination*. For, whether the cause of the uremic symptom-complex be the retention of one or several—probably the latter—of the urinary constituents, the fact remains that when diseased kidneys are unable to eliminate these toxic materials, they must be removed through other channels; the channel affording the quickest discharge being imperative for the gravest manifestations. Undoubtedly, uremic convulsions—which are surely grave and fatal enough ordinarily—will yield most promptly and surely to venesection for obvious reasons.

Broadbent attributes uremic convulsions, not to the accumulation of toxic urinary substances, but to high arterial tension. But surely this cannot explain all cases, if any, solely; for we frequently meet with cases of uremic eclampsia where the pulse is small, weak and of low tension; yet, even in these, venesection has done good, the pulse improving while the vein is bleeding. The restored secretory action of the skin and kidneys seen after blood-letting—as in the case reported here—doubtless result from the relief from congestion and an accelerated and balanced circulation.

It would be well, perhaps, to bleed in imminent cases of uremic convulsions, as recommended by Robinson.* The hypodermic injection of morphine and urethane (Washburn—Kinnicutt) whilst tending to control the convulsions, also obscure danger signals and symptoms: and do not remove the *materies morbi*—the essential procedure. Phlebotomy has an added advantage, in that where the intravenous injection of a saline blood solution is indicated, this can be readily accomplished.

Finally, given a clear case of uremic convulsions, with pulse either of high or low tension, and with cyanosis and capillary cutaneous congestion, venesection should be practiced as inevitably, almost, as the initial letter (*v*) of the term expressing the method of elimination follows alphabetically that (*u*) of the word expressing the multifarious condition of which the epileptiform seizures are but one manifestation—dreadful enough in themselves. In short, to quote the words of Dr. Stephen Mackenzie, in opening the discussion before the Royal Medical and Surgical Society, I may say: "I advocate its *use*."

1836 Wallace St., Philadelphia, Pa.

*N. Y. Med. Rec., March 17, 1894.

